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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,434	12/26/2001	Yoshio Kishima	F-7266	9300

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EXAMINER	
MARTIR, LILYBETT	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/033,434	KISHIMA ET AL.	
	Examiner	Art Unit	
	Lilybett Martir	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 7-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,7-11 and 14-16* is/are rejected.

7)☒ Claim(s) *12,13,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,3-5 and 7-10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al. (Pat. 4,934,185) in view of Yamamoto et al. (Pat. 6,295,866).

- With respect to claims 1 and 5, Nishiyama et al. teaches a cutting blade 47, means for inserting an edge of the cutting blade 47 into an upper layer of a structure 35 as do elements 71 and all of the elements that work in conjunction with said element that are located in top of it as noted in Figure 1 (Col. 7, lines 14-17), a moving means for moving the cutting blade substantially in parallel with an interface between the upper and lower layers of the structure 35 as does element 11 (Col. 6, lines 10-21), a depth of the cutting blade being controlled (Col. 7, lines 1-15), and measuring means for measuring a force exerted on the cutting blade substantially in parallel with the interface as in element 4. Nishiyama et al. fails to teach the provision of a control means for automatically controlling the cutting blade and it's depth relative to the interface. Yamamoto et al. teaches a surface measuring device that comprises a

controller 51 that controls the force on a probe 11 in the z direction and hence on tracer 15 which is subjected upon workpiece 1 (Col. 5, lines 26-35). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the strength-measuring device of Nishiyama et al. utilizing the teachings of the surface measuring device of Yamamoto et al. by providing it with a control means for automatically controlling the load exerted on a cutting blade or probe and as a result it's depth relative to the interface to therefore make said strength-measuring device and the measurements obtained by it's use more reliable and accurate.

- With respect to claims 3 and 7, Nishiyama et al. teaches the utilization of means for expressing the force exerted on the cutting blade substantially in parallel or vertically with the interface and the depth of the cutting blade as does element 28 in the form of a graphic profile of change with time as noted in Figures 11(a) to 11(d).
- With respect to claims 4 and 8, Nishiyama et al. teaches the evaluation, detection and testing of films as thin as in the micrometer (μm) range (See Figures 11(a) to 11(d). Nishiyama et al. fails to disclose the specific displacement of his blade so that it increases and increases and decreases by 2μm. Since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art (In re

Aller, 105 USPQ 233), it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the measuring device of Nishiyama et al. by selecting a specific range of measurements to be detected and evaluated to therefore modify the reliability and precision of his device.

- With respect to claims 9 and 14, Nishiyama et al. fails to specifically teach moving the cutting blade while automatically controlling the depth of the cutting blade to be constant. Yamamoto et al. teaches a surface measuring device that comprises a controller 51 that controls the force on a probe 11 in the z direction to make it constant and hence control the force subjected on tracer 15 which is subjected upon workpiece 1 (Col. 5, lines 26-35, Col. 6, lines 1-10). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the strength-measuring device of Nishiyama et al. utilizing the teachings of the surface measuring device of Yamamoto et al. by providing it with a control means for automatically controlling the load exerted on a cutting blade or probe and making it constant so that as a result it's depth relative to the interface to therefore make said strength-measuring device and the measurements obtained by it's use more reliable and accurate.

- With respect to claims 10 and 15, Nishiyama et al. teaches measuring a variable force exerted on the cutting blade substantially vertical to the

interface by means of element 21 (Col. 6-7, lines 61-3, Col. 8, lines 28-40) but he fails to specifically teach maintaining the cutting depth constant. Yamamoto et al. teaches a surface-measuring device that comprises a controller 51 that controls the force on a probe 11 in the z direction to make it constant and hence control the force subjected on tracer 15, which is subjected upon workpiece 1 (Col. 5, lines 26-35, Col. 6, lines 1-10). Even though it is not understood how the load over the surface can be modified while expecting no change in the depth of the blade which will as a result of said loading tend to displace, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the strength-measuring device of Nishiyama et al. utilizing the teachings of the surface measuring device of Yamamoto et al. by providing controlling the load exerted on a cutting blade or probe and making it constant so that as a result it's depth relative to the interface to therefore make said strength-measuring device and the measurements obtained by it's use more reliable and accurate.

3. Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiyama et al. (Pat. 4,934,185) in view of Yamamoto et al. as applied to claims 1 and 5 above, and further in view of Bousfield et al. (Pat. 6,050,139).

- With respect to claims 11 and 16, Nishiyama et al. teaches utilizing a first motor 11 arranged to move the cutting blade 15 in a direction parallel to

the interface 22 (Col. 8, lines 27-47). Nishiyama et al. fails to teach the utilization and provision of a second motor to move the cutting blade in a direction vertical or perpendicular to the interface. Bousfield et al. teaches the utilization of a motor 18 to move the probe 12 (Col. 3-4, lines 64-6). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the strength-measuring device of Nishiyama et al. as modified by Yamamoto et al. and further using the teachings of the testing device of Bousfield et al. by providing it with a motor instead of utilizing manual means to further facilitate the movement of the displaceable portion in a commonly known and automatic manner to therefore make said strength-measuring device more efficient and modern.

Allowable Subject Matter

4. Claims 12-13 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, or if the limitations on said claims are added in the base claim, including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

6. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (571)272-2182. The examiner can normally be reached on 9:00 AM to 5:30 PM.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571)272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LM

Lilybett Martir
Examiner
Art Unit 2855

LCM

EDWARD LEFKOWITZ
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